REMARKS

Claims 1, 3-17, and 19-31 are pending. Claims 1, 9, 12, 15, and 17 are in independent form.

Rejections under 35 U.S.C. § 102

In the action mailed May 30, 2007, claim 9 was rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 4,585,342 to Lin et al. (hereinafter "Lin").

Claim 9 relates to a system that includes a processor and a radiation detector adapted to communicate with the processor. The radiation detector is dimensioned to fit on a wafer stage of a lithography tool. The radiation detector comprises a detector element to detect an amount of radiation incident on the detector element and a memory to store data describing the amount of radiation detected.

Lin neither describes nor suggests a radiation detector that is dimensioned to fit on a wafer stage of a lithography tool and that comprises a memory to store data describing the amount of radiation detected by a detector element, as recited in claim 9.

In this regard, as discussed in the response filed March 16, 2007, the only memory described in Lin is located at computer 3. Computer 3 is not dimensioned to fit on a wafer stage of a lithography tool. Thus, Lin's computer 3 is not a radiation detector, as recited.

Moreover, Lin's wafer 28 does not "comprise" computer 3. Thus, Lin's wafer 28 does not "comprise" a hard drive or any other memory element in computer 3.

Indeed, even if one of ordinary skill were to consider Lin's wafer 28 to "comprise" computer 3, claim 9 would still not be anticipated by Lin. In particular, a wafer 28 that comprises computer 3 is not dimensioned to fit on a wafer stage of a lithography tool.

Accordingly, claim 9 is not anticipated by Lin. Applicant respectfully requests that the rejections of claims 9 and the claims dependent therefrom be withdrawn.

Claim 9 was also rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent Publication No. 2003/0074097 to Mautz et al. (hereinafter "Mautz").

The rejection of claim 9 contends that Mautz' mask container is a radiation detector, as recited.

Applicant respectfully disagrees on several basis. As a threshold matter, Applicant would like to point out that a mask is not a wafer. *See, e.g., Mautz*, para. [0002] (describing the use of a mask to expose a wafer). Moreover, Mautz' mask container is to be used in transporting masks between different exposure tools. *See, e.g., id.*, paras. [0005], [0015]-[0016], [0050]. It is axiomatic that masks must be removed from Mautz' containers before being used to expose wafers. *See, e.g., id.*, paras. [0087], [0069]-[0070]. In particular, if a wafer were exposed using Mautz' mask containers, the exposure would be marred by the same contamination that Mautz seeks to avoid by using mask containers. *See, e.g., id.*, paras. [0005].

Against this backdrop, the rejection contends that Mautz' mask containers are radiation detectors dimensioned to fit on a wafer stage of a lithography tool. Applicant respectfully disagrees. In particular, Mautz' mask containers must be large enough to at least contain a mask. To the best of applicant's understanding, this is incompatible with the recited dimensioning.

Moreover, Mautz' mask containers do not comprise a detector element to detect an amount of radiation incident on the mask containers and a memory to store data describing the amount of radiation detected. As discussed above, masks must be removed from Mautz' mask containers before being used to expose wafers.

There is no description or suggestion that Mautz' mask containers comprise a detector element to detect an amount of radiation incident on the mask containers, much less that a memory stores data describing this amount. Indeed, Mautz describes that the memory on Mautz' mask containers store lithography data "concerning the masks" and not lithography data concerning the mask containers. *See, e.g., id.*, para. [0053].

Accordingly, claim 9 is not anticipated by Mautz. Applicant respectfully requests that the rejections of claims 9 and the claims dependent therefrom be withdrawn.

Claim 12 was rejected under 35 U.S.C. § 102(b) as anticipated by Lin.

Claim 12 relates to an apparatus that includes a wafer sized to fit on a wafer stage of a lithography tool. The wafer includes a radiation detector to produce a signal describing an amount of radiation incident on the radiation detector, a processor electrically coupled to the radiation detector, and a memory electrically coupled to the processor. The processor is to process the signal from the radiation detector. The memory is to store data received from the processor. The data results from the processing of the signal describing the amount of radiation incident on the detector.

Lin neither describes nor suggests a wafer sized to fit on a wafer stage of a lithography tool and that includes a radiation detector, a processor, and a memory, as recited in claim 12.

As discussed above, the only memory and processor described in Lin is located at computer 3. Computer 3 is not a wafer sized to fit on a wafer stage of a lithography tool.

Moreover, Lin's wafer 28 does not "comprise" computer 3. Thus, Lin's wafer 28 does not "comprise" a processor, a hard drive, or any other memory element in computer 3. Indeed, even if one of ordinary skill were to consider Lin's wafer 28 to "comprise" computer 3, claim 12 would still not be anticipated by Lin. In particular, a wafer 28 that comprises computer 3 is not sized to fit on a wafer stage of a lithography tool.

Accordingly, claim 12 is not anticipated by Lin. Applicant respectfully requests that the rejections of claims 12 and the claims dependent therefrom be withdrawn.

Rejections under 35 U.S.C. § 103(a)

Claim 1 was rejected under 35 U.S.C. § 103(a) as obvious over Lin and Maltz.

Claim 1 relates to an apparatus that includes a wafer adapted to fit on a wafer stage of a lithography tool. The wafer includes a radiation detector to produce a signal

corresponding to an amount of radiation incident on the radiation detector, a processor in communication with the radiation detector to receive the signal, the processor to process the signal from the radiation detector, and a wireless transmitter in communication with the processor to receive results of processing the signal and output a wireless signal based on the results.

The rejection of claim 1 is based on the contention that it would have been obvious for one of ordinary skill to have combined Lin and Maltz and arrived at the recited subject matter. Applicant respectfully disagrees on several bases.

For example, claim 1 recites a wafer that is adapted to fit on a wafer stage of a lithography tool and that includes a processor in communication with a radiation detector. Even if Lin and Maltz were combined (which applicant does not concede), one of ordinary skill in the art would not arrive at such a wafer. As discussed above, Lin's wafer 28 does not "comprise" computer 3. Thus, Lin's wafer 28 does not "comprise" a processor in computer 3.

Indeed, even if one of ordinary skill were to consider Lin's wafer 28 to "comprise" computer 3, Lin would still fail to describe or suggest a wafer as recited in claim 1. In this regard, Lin's computer 3 is clearly not adapted to fit on a wafer stage of a lithography tool.

Maltz does nothing to remedy these deficiencies in Lin. Maltz' focus is on masks and mask containers—not wafers. Moreover, there is nothing in Maltz that describes or suggests a wafer that is adapted to fit on a wafer stage of a lithography tool and that includes a processor in communication with a radiation detector.

Accordingly, claim 1 is not obvious over Lin and Maltz. Applicant respectfully requests that the rejections of claim 1 and the claims dependent therefrom be withdrawn.

Claim 15 was rejected under 35 U.S.C. § 103(a) as obvious over Lin and Maltz.

Claim 15 relates to an apparatus that includes a wafer substrate sized to fit on a wafer stage of a lithography tool, a radiation detector fabricated on the wafer substrate, a processor attached to the wafer substrate, the processor to process the signal indicative of the amount of radiation incident on the radiation detector, and a wireless transmitter fabricated on the wafer substrate. The radiation detector is to produce a signal indicative of an amount of radiation incident on the radiation detector. The processor is electrically coupled to the radiation detector. The wireless transmitter is in communication with the processor to receive results of processing the signal and output a wireless signal based on the results.

The rejection of claim 15 is based on the contention that it would have been obvious for one of ordinary skill to have combined Lin and Maltz and arrived at the recited subject matter. Applicant respectfully disagrees on several bases.

For example, claim 15 recites a wafer substrate sized to fit on a wafer stage of a lithography tool and on which a wireless transmitter is fabricated.

Even if Lin and Maltz were combined (which applicant does not concede), one of ordinary skill in the art would not arrive at such a wafer substrate. No wireless transmitter is fabricated on Lin's wafer 28. As for Maltz, Maltz' focus is on masks and mask containers—not wafer substrates. There is nothing in Maltz that describes or suggests a wafer substrate sized to fit on a wafer stage of a lithography tool and on which a wireless transmitter is fabricated.

Accordingly, claim 15 is not obvious over Lin and Maltz. Applicant respectfully requests that the rejections of claim 15 and the claims dependent therefrom be withdrawn.

Claim 17 was rejected under 35 U.S.C. § 103(a) as obvious over Lin and Maltz.

Claim 17 relates to a method that includes loading a wafer-shaped detector onto a wafer stage of a first lithography tool, detecting an amount of radiation from the first lithography tool that is incident on the wafer-shaped detector, and wirelessly

transmitting a first signal indicative of the amount of radiation incident on the wafer-shaped detector to a remote receiver.

The rejection of claim 17 is based on the contention that it would have been obvious for one of ordinary skill to have combined Lin and Maltz and arrived at the recited subject matter. Applicant respectfully disagrees on several bases.

For example, claim 17 recites wirelessly transmitting a first signal indicative of the amount of radiation incident on a wafer-shaped detector to a remote receiver..

Even if Lin and Maltz were combined (which applicant does not concede), one of ordinary skill in the art would not perform such a wireless transmission. No wireless transmitter is fabricated on Lin's wafer 28. Instead, Lin describes that communication with wafer 28 is to be wired.

As for Maltz, does nothing to lead one or ordinary skill in the art away from this. Maltz' focus is on masks and mask containers—not wafer substrates. There is nothing in Maltz that involves detecting an amount of radiation that is incident on a wafer-shaped detector, much less wirelessly transmitting a first signal indicative of this amount.

Accordingly, claim 17 is not obvious over Lin and Maltz. Applicant respectfully requests that the rejections of claim 17 and the claims dependent therefrom be withdrawn.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicant asks that all claims be allowed. No fees are believed due at this time. Please apply any credits or charges to deposit account 06-1050.

Respectfully submitted,

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